

SEQUENCE LISTING

<110> PALESE, PETER  
BASLER, CHRISTOPHER F.  
GARCIA-SASTRE, ADOLFO

<120> CHRIS-LIKE VIRUS, COMPOSITIONS, VACCINES AND USES THEREOF

<130> PP-26000-US

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<150> 60/483,337  
<151> 2003-06-27

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<170> PatentIn Ver. 3.2

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 cgagacccca cttcagaaac acttcaatc caggcactt ccagagcatt taacggtgac 2100  
 tttgactctt tgctgtctag acttaaatat gatgacagtg atttccttga ttgttggag 2160  
 agtgacagca tcagaggaag aataatagat gtgtctctag aagattacat aattacaatt 2220  
 cagattgagt accctgcttc tatttggaca ataaaaggga tggctacta taccaggaca 2280  
 tttcaattta ataacgctat aatactagag gaactgagtg gatatctata tttcctaagc 2340  
 agctgttggg tagagggact tacatatcta acattgatata atcacaatgt gttctgctg 2400  
 caacttctat tatatgcaaa tcagacacta gtaccctat tagttctgct acttgggctc 2460  
 tgtgctacag ggaatgtaac tagctgcgcc agaactaggg ttgtaaatgc tcatgtcccc 2520  
 aggttgctc tctcaggtgg ttttatattt gctaattgtg cacctgttgc atgtaaatgc 2580  
 caagatccgc ttatagcat aaatcaagaa cccaaagtga caaatgtata ggtcgatgtt 2640  
 gatgcctgta aagagatgta tcttgcgttta ttatacataa cacttggtaa gtcacagtta 2700  
 cccctgtcta tttatggca ggtatgtgtt ttggggaggtt caataagcgt ggatctcata 2760  
 gacctgggca atgagatcaa ttcaatcaat agtgcataatc ataggtcgga ggagcatctg 2820  
 gatcatgcaaa atgagctact tttatggtaa aatcctaaga tagtcaatgtt caagacccctc 2880  
 ggggttatgt tggattattt gctgctctg atactatgtt gtgttgcac ttgttgg 2940  
 ctcatttgcc ttacaaaaca agtgagtaga gtgtctttt gaggaaagcat ggtagtcgg 3000  
 gcaccgcacag ttaatttact ctccggattt gtgggttaac ataaagaaaaa tggtactctg 3060  
 gttataatat acatgatttag tatttgcgtt gaccctttac ggtacaatcc agcttaggct 3120  
 ctatcattcc tatttcaata aggtgctaac caaaaaaaaaaaaaaaa 3170

<210> 9  
 <211> 340  
 <212> PRT  
 <213> Paramyxovirus Chris-like Virus  
 <400> 9

Met	Ala	Gly	Asn	Ala	Gly	Thr	Ala	Asp	Phe	Leu	Asn	Ser	Ser	Trp	Glu
1														15	
Glu	Gly	Gly	Thr	Leu	Thr	Ala	Ile	Asp	Pro	Glu	Ala	Asp	Glu	Arg	Gly
														30	
Arg	Leu	Ile	Pro	Lys	Tyr	Arg	Val	Ile	Asn	Pro	Gly	Thr	Asn	Ser	Arg
														45	
Lys	Ser	Ala	Gly	Tyr	Met	Tyr	Leu	Leu	Val	His	Gly	Ile	Ile	Glu	Glu
														60	
Lys	Asp	Val	Ala	Gly	Ala	Ser	Ala	Lys	Asn	Asn	Lys	Thr	Phe	Ala	Ala
														80	
Phe	Pro	Leu	Gly	Val	Gly	Arg	Ser	Asn	Ala	Leu	Pro	Gln	Asp	Leu	Leu
														95	
Asp	Ser	Val	Val	Gly	Leu	Asp	Val	Thr	Val	Arg	Arg	Thr	Ala	Gly	Ser
														110	
Ser	Glu	Met	Leu	Val	Phe	Gly	Thr	Ser	Asn	Ile	Ser	Pro	Val	Leu	Thr
														125	
115															

Pro Trp Lys Asp Ile Leu Thr Thr Gly Ala Ile Phe Pro Ala Ile Lys  
 130 135 140  
 Val Cys Asn Asn Val Asp Met Val Ala Val Asp Arg Gln Gln Lys Phe  
 145 150 155 160  
 Arg Cys Ile Phe Leu Thr Ile Thr Met Leu Thr Asp Ala Gly Val Tyr  
 165 170 175  
 Lys Val Pro Lys Thr Ile Leu Asp Phe Arg Met Ala Asn Ala Val Ser  
 180 185 190  
 Phe Asn Leu Leu Val Glu Leu Leu Ile Gly Ala Asp Met Thr Ala Ser  
 195 200 205  
 Gly Ile Lys Gly Ile Ile Asn Asp Tyr Gly Glu Arg Val Thr Thr Phe  
 210 215 220  
 Met Ile His Val Gly Asn Phe Leu Arg Arg Arg Asn Lys Glu Tyr Ser  
 225 230 235 240  
 Val Asp Tyr Cys Arg Gln Lys Ile Asp Lys Met Asp Leu Arg Phe Ser  
 245 250 255  
 Leu Gly Ala Val Gly Gly Leu Ser Leu His Val Cys Ile Lys Gly Lys  
 260 265 270  
 Met Ser Asn Ala Leu Lys Ala Gln Leu Gly Tyr Lys Thr Thr Ile Cys  
 275 280 285  
 Tyr Ser Leu Met Asp Thr Asn Pro Tyr Leu Asn Lys Leu Met Trp Lys  
 290 295 300  
 Ala Glu Cys Lys Ile Asn Lys Val Thr Ala Val Leu Gln Pro Ser Val  
 305 310 315 320  
 Pro Lys Glu Phe Lys Val Tyr Glu Asp Val Leu Ile Asp His Thr Gly  
 325 330 335  
 Lys Ile Met Lys  
 340  
 <210> 10  
 <211> 497  
 <212> PRT  
 <213> Paramyxovirus Chris-like Virus  
 <400> 10  
 Met Ser Asp Tyr Asn Pro Asp Val Leu Gln Gln Leu Val Lys Asp Gly  
 1 5 10 15  
 Ile Lys Thr Ile Glu Leu Leu Gln Gln Ser Pro Glu Asp Phe Gln Lys  
 20 25 30  
 Thr Tyr Gly Arg Ser Ala Ile Gln Glu Pro Ser Thr Arg Ala Arg Ile  
 35 40 45  
 Gln Ser Trp Glu Ser Arg Asn Pro Asp His Asp Tyr Thr Gly Asn Lys  
 50 55 60  
 Asn Gln Arg Ser Glu Gly Ala Lys Glu Arg Ala Asn Lys Ser Glu Ser  
 65 70 75 80  
 Ala Gly Thr Ala Ser Ala Asp Gly Gly His Gly Asp Lys Pro Ser Asn  
 85 90 95  
 Asn Gly Gly Asp Ser Gln Asn Glu Tyr Gln Gly Ser Asp Gln Gln Val  
 100 105 110  
 Trp Asp Ala Ala Tyr Asn Asp Gly Asn Ser Gly Gly Ala Trp Gly Gly  
 115 120 125  
 Pro Thr Gly Gly Leu Pro Thr Ala Gly Glu Arg Gly Tyr Pro Ile Thr  
 130 135 140  
 Thr Gly Asn Gln Glu Phe Glu Gly Tyr His Pro Asp Gly Pro Val Asp  
 145 150 155 160  
 Ala Arg Glu Tyr Asn Gln Ile Ser Ser Met Asp His Glu Met Ser Ala  
 165 170 175  
 Ala Glu Thr Leu Gly Ser Ser Thr Gln Leu Thr Thr Met Arg Asn Ala  
 180 185 190

Thr Thr Asp Asp Phe Ala Lys Ile Phe Glu Glu Gly Thr Pro Lys Val  
 195 200 205  
 His Arg Arg Leu Arg Gly Ile Thr Ala Val Val Pro Ala Gln Lys Gln  
 210 215 220  
 Pro Gly Ala Val Gly Gly Pro Val Lys Lys Gly Thr Asp Gly Ser Thr  
 225 230 235 240  
 Ala Ser Thr Leu Leu Gly Asp Val Pro Leu Ser Gly Ser Gly Ala Ile  
 245 250 255  
 Pro Asn Val His Pro Ser Leu Leu His Gln Pro Lys Lys Asn Ala His  
 260 265 270  
 Ala Glu Asn Ala Gln Gly Ser Val Gln Asp Val Ser Thr Thr Gly Ala  
 275 280 285  
 Ile Gly Gln Ser Asp Glu Ala Ala His Phe Asp Gln Glu Ile Glu Gly  
 290 295 300  
 Lys Leu Asn Leu Val Leu Lys Glu Leu Asp Leu Ile Ser Lys Lys Leu  
 305 310 315 320  
 Asp Tyr Leu Pro Glu Ile Lys Glu Glu Ile Arg Asn Ile Asn Lys Lys  
 325 330 335  
 Ile Thr Asn Leu Ser Leu Gly Leu Leu Tyr Ser Leu Lys Thr Tyr Ile  
 340 345 350  
 Lys Ser Met Met Ile Ile Pro Ser Ser Gly Lys Pro Asp Val Asn  
 355 360 365  
 Asp Thr Ala Glu Val Asn Pro Asp Leu Lys Ala Val Ile Gly Arg Asp  
 370 375 380  
 Lys Thr Arg Gly Leu Lys Glu Val Thr Thr His Arg Ser Asp Leu Glu  
 385 390 395 400  
 Ser Leu Asp Leu Leu Ser Pro Ala Thr Ser Glu Ile Asp Pro Lys Tyr  
 405 410 415  
 Leu Thr Gln Asp Leu Asp Phe Thr Lys Ser Asn Ala Ala Asn Phe Val  
 420 425 430  
 Pro Gly Asn Asp Ala Ser Ser Phe Tyr Thr Ile Val Ala Met Ile Lys  
 435 440 445  
 Gly Glu Val Thr Asp Val Lys Arg Gln Gln Glu Leu Ile Lys Trp Val  
 450 455 460  
 Ser Asp Ser Met Asn Lys His Pro Met Gly Gln Ile Tyr Arg Val Val  
 465 470 475 480  
 Arg Glu Ala Leu Asp Ala Glu Ser Asp Ser Ser Ser Ser Asp Ser  
 485 490 495  
 Asp

<210> 11  
 <211> 546  
 <212> PRT  
 <213> Paramyxovirus Chris-like Virus  
 <400> 11  
 Met Glu Val Thr Ile Leu Thr Ala Tyr Ile Ala Ala Ser Val Phe Thr  
 1 5 10 15  
 Cys Cys His Ser Gln Leu Ala Leu Ser Glu Leu Thr Lys Ile Gly Ile  
 20 25 30  
 Ile Pro Gly Arg Ser Tyr Asp Leu Lys Thr Ser Thr Gln Ala Ser Tyr  
 35 40 45  
 Gln Tyr Met Val Ile Lys Leu Ile Pro Asn Val Asn Gly Leu Asn Asn  
 50 55 60  
 Cys Thr Asn Ser Thr Val Glu Ser Tyr Lys Lys Met Leu Thr Arg Leu  
 65 70 75 80  
 Leu Asn Pro Ile Asp Val Ala Leu Lys Lys Met Lys Asn Ala Val Ser  
 85 90 95

Asp Lys Ala Pro Glu Lys Leu Gly Asn Val Glu Phe Trp Gly Ala Val  
 100 105 110  
 Ile Gly Gly Val Ala Leu Gly Val Ala Thr Ser Ala Gln Ile Thr Ala  
 115 120 125  
 Gly Val Ala Leu His Asn Ser Ile Gln Asn Ala Asn Ala Ile Leu Thr  
 130 135 140  
 Leu Lys Asp Ser Ile Arg Gln Ser Asn Lys Ala Ile Gln Glu Leu Gln  
 145 150 155 160  
 Thr Ala Met Ser Thr Thr Val Val Val Leu Asn Ala Leu Gln Asp Gln  
 165 170 175  
 Ile Asn Asn Gln Leu Ala Pro Ala Ile Asn Ser Leu Gly Cys Gln Val  
 180 185 190  
 Val Ala Asn Thr Leu Gly Leu Lys Leu Asn Gln Tyr Phe Ser Glu Ile  
 195 200 205  
 Ser Leu Val Phe Gly Pro Asn Leu Arg Asp Pro Thr Ser Glu Thr Leu  
 210 215 220  
 Ser Ile Gln Ala Leu Ser Arg Ala Phe Asn Gly Asp Phe Asp Ser Ile  
 225 230 235 240  
 Ala Val Leu Asp Leu Asn Met Met Thr Val Ile Ser Leu Ile Leu Leu  
 245 250 255  
 Glu Ser Asp Ser Ile Arg Gly Arg Ile Ile Asp Val Ser Leu Glu Asp  
 260 265 270  
 Tyr Leu Ile Thr Ile Gln Ile Glu Tyr Pro Ala Leu Leu Thr Ile Lys  
 275 280 285  
 Asp Gly Tyr Tyr Thr Asp Ile Gln Phe Asn Lys Leu Leu Ile Leu Glu  
 290 295 300  
 Glu Leu Ser Gly Tyr Leu Tyr Phe Leu Ser Ser Cys Trp Leu Glu Gly  
 305 310 315 320  
 Leu Thr Tyr Leu Thr Leu Ile Tyr His Asn Val Phe Leu Leu Gln Leu  
 325 330 335  
 Leu Leu Tyr Ala Asn Gln Thr Leu Val Pro Leu Leu Val Leu Leu  
 340 345 350  
 Gly Leu Val Leu Gln Gly Met Leu Thr Ser Cys Ala Arg Thr Arg Val  
 355 360 365  
 Val Asn Ala His Val Pro Arg Phe Ala Leu Ser Gly Gly Val Ile Phe  
 370 375 380  
 Ala Asn Cys Ala Pro Val Val Cys Lys Cys Gln Asp Pro Leu Tyr Ser  
 385 390 395 400  
 Ile Asn Gln Glu Pro Lys Val Thr Asn Val Met Val Asp Val Asp Ala  
 405 410 415  
 Cys Lys Glu Met Tyr Leu Asp Gly Leu Tyr Ile Thr Leu Gly Lys Ser  
 420 425 430  
 Gln Leu Pro Arg Ala Met Tyr Ala Glu Asp Val Ser Leu Gly Gly Pro  
 435 440 445  
 Ile Ser Val Asp Leu Ile Asp Leu Gly Asn Glu Ile Asn Ser Ile Asn  
 450 455 460  
 Ser Ala Ile Asn Arg Ser Glu Glu His Leu Asp His Ala Asn Glu Leu  
 465 470 475 480  
 Leu Asp Gln Val Asn Pro Lys Ile Val Asn Val Lys Thr Phe Gly Val  
 485 490 495  
 Met Leu Gly Leu Leu Leu Leu Ile Leu Trp Cys Val Val Thr Leu  
 500 505 510  
 Val Trp Leu Ile Cys Leu Thr Lys Gln Val Ser Arg Val Ser Phe Gly  
 515 520 525  
 Gly Ser Met Gly Ser Arg Ala Pro Thr Val Asn Ser Leu Ser Gly Phe  
 530 535 540  
 Val Gly

<210> 12  
 <211> 292  
 <212> PRT  
 <213> Paramyxovirus Chris-like Virus  
 <400> 12

Met Ser Asp Tyr Asn Pro Asp Val Leu Gln Gln Leu Val Lys Asp Gly  
 1 5 10 15  
 Ile Lys Thr Ile Glu Leu Leu Gln Gln Ser Pro Glu Asp Phe Gln Lys  
 20 25 30  
 Thr Tyr Gly Arg Ser Ala Ile Gln Glu Pro Ser Thr Arg Ala Arg Ile  
 35 40 45  
 Gln Ser Trp Glu Ser Arg Asn Pro Asp His Asp Tyr Thr Gly Asn Lys  
 50 55 60  
 Asn Gln Arg Ser Glu Gly Ala Lys Glu Arg Ala Asn Lys Ser Glu Ser  
 65 70 75 80  
 Ala Gly Thr Ala Ser Ala Asp Gly Gly His Gly Asp Lys Pro Ser Asn  
 85 90 95  
 Asn Gly Gly Asp Ser Gln Asn Glu Tyr Gln Gly Ser Asp Gln Gln Val  
 100 105 110  
 Trp Asp Ala Ala Tyr Asn Asp Gly Asn Ser Gly Gly Ala Trp Gly Gly  
 115 120 125  
 Pro Thr Gly Gly Leu Pro Thr Ala Gly Glu Arg Gly Tyr Pro Ile Thr  
 130 135 140  
 Thr Gly Asn Gln Glu Phe Glu Gly Tyr His Pro Asp Gly Pro Val Asp  
 145 150 155 160  
 Ala Arg Glu Tyr Asn Gln Ile Ser Ser Met Asp His Glu Met Ser Ala  
 165 170 175  
 Ala Glu Thr Leu Gly Ser Ser Thr Gln Leu Thr Thr Met Arg Asn Ala  
 180 185 190  
 Thr Thr Asp Asp Phe Ala Lys Ile Phe Glu Glu Gly Thr Pro Lys Val  
 195 200 205  
 His Arg Arg Leu Arg Gly Ile Thr Ala Val Val Pro Ala Gln Lys Gln  
 210 215 220  
 Pro Gly Ala Val Gly Gly Pro Val Lys Lys Gly His Arg Arg Glu Tyr  
 225 230 235 240  
 Cys Ile Asp Thr Phe Gly Gly Arg Thr Ile Ile Arg Glu Trp Cys Asn  
 245 250 255  
 Pro Gln Cys Ala Pro Leu Thr Val Thr Pro Thr Gln Lys Glu Cys Ser  
 260 265 270  
 Cys Gly Glu Cys Pro Arg Gln Cys Ala Arg Cys Ile Asp Asp Arg Gly  
 275 280 285  
 Tyr Trp Pro Lys  
 290

<210> 13  
 <211> 160  
 <212> PRT  
 <213> Paramyxovirus Chris-like Virus  
 <400> 13

Met Ser Ser Ser Ser Leu Ser Arg Met Glu Ser Arg Leu Ser Ser Phe  
 1 5 10 15  
 Tyr Ser Arg Val Arg Lys Thr Phe Arg Arg Arg Thr Ala Glu Val Pro  
 20 25 30

Ser Arg Ser Arg Arg Gln Glu Pro Glu Ser Lys Val Gly Ser Pro Ala  
     35                    40                    45  
 Ile Pro Ile Met Ile Thr Pro Val Ile Lys Ile Arg Glu Ala Arg Glu  
     50                    55                    60  
 Leu Lys Arg Glu Gln Thr Arg Ala Arg Ala Arg Glu Leu Leu Gln Leu  
     65                    70                    75                    80  
 Met Glu Asp Met Glu Ile Asn Pro Gln Ile Thr Gly Val Thr Pro Lys  
     85                    90                    95  
 Thr Ser Thr Lys Gly Gln Ile Asn Arg Tyr Gly Met Leu Arg Ile Met  
     100                    105                    110  
 Met Gly Ile Val Ala Glu Leu Gly Glu Val Pro Gln Val Asp Phe Pro  
     115                    120                    125  
 Arg Leu Glu Lys Glu Gly Ile Leu Ser Gln Gln Glu Ile Lys Asn Leu  
     130                    135                    140  
 Arg Asp Thr Ile Pro Thr Val Gln Leu Met Leu Glu Ser Ile Ile Arg  
     145                    150                    155                    160

<210> 14  
 <211> 313  
 <212> PRT  
 <213> Paramyxovirus Chris-like Virus

<400> 14  
 Met Ser Asp Tyr Asn Pro Asp Val Leu Gln Gln Leu Val Lys Asp Gly  
     1                    5                    10                    15  
 Ile Lys Thr Ile Glu Leu Leu Gln Gln Ser Pro Glu Asp Phe Gln Lys  
     20                    25                    30  
 Thr Tyr Gly Arg Ser Ala Ile Gln Glu Pro Ser Thr Arg Ala Arg Ile  
     35                    40                    45  
 Gln Ser Trp Glu Ser Arg Asn Pro Asp His Asp Tyr Thr Gly Asn Lys  
     50                    55                    60  
 Asn Gln Arg Ser Glu Gly Ala Lys Glu Arg Ala Asn Lys Ser Glu Ser  
     65                    70                    75                    80  
 Ala Gly Thr Ala Ser Ala Asp Gly Gly His Gly Asp Lys Pro Ser Asn  
     85                    90                    95  
 Asn Gly Gly Asp Ser Gln Asn Glu Tyr Gln Gly Ser Asp Gln Gln Val  
     100                    105                    110  
 Trp Asp Ala Ala Tyr Asn Asp Gly Asn Ser Gly Gly Ala Trp Gly Gly  
     115                    120                    125  
 Pro Thr Gly Gly Leu Pro Thr Ala Gly Glu Arg Gly Tyr Pro Ile Thr  
     130                    135                    140  
 Thr Gly Asn Gln Glu Phe Glu Gly Tyr His Pro Asp Gly Pro Val Asp  
     145                    150                    155                    160  
 Ala Arg Glu Tyr Asn Gln Ile Ser Ser Met Asp His Glu Met Ser Ala  
     165                    170                    175  
 Ala Glu Thr Leu Gly Ser Ser Thr Gln Leu Thr Thr Met Arg Asn Ala  
     180                    185                    190  
 Thr Thr Asp Asp Phe Ala Lys Ile Phe Glu Glu Gly Thr Pro Lys Val  
     195                    200                    205  
 His Arg Arg Leu Arg Gly Ile Thr Ala Val Val Pro Ala Gln Lys Gln  
     210                    215                    220  
 Pro Gly Ala Val Gly Gly Pro Val Lys Lys Gly Ala Pro Thr Gly Val  
     225                    230                    235                    240  
 Leu His Arg His Phe Trp Gly Thr Tyr His Tyr Pro Gly Val Val Gln  
     245                    250                    255  
 Ser Pro Met Cys Thr Pro His Cys Tyr Thr Asn Pro Lys Arg Met Leu

260	265	270
Met Arg Arg Met Pro Lys Ala Val Cys Lys Met Tyr Arg Arg Pro Gly		
275	280	285
Leu Leu Ala Lys Val Thr Arg Leu His Thr Leu Ile Arg Arg Leu Lys		
290	295	300
Glu Asn Ser Ile Leu Cys Leu Arg Asn		
305	310	

<210> 15		
<211> 709		
<212> PRT		
<213> Paramyxovirus Nipah Virus		
<400> 15		
Met Asp Lys Leu Glu Leu Val Asn Asp Gly Leu Asn Ile Ile Asp Phe		
1 5 10 15		
Ile Gln Lys Asn Gln Lys Glu Ile Gln Lys Thr Tyr Gly Arg Ser Ser		
20 25 30		
Ile Gln Gln Pro Ser Ile Lys Asp Gln Thr Lys Ala Trp Glu Asp Phe		
35 40 45		
Leu Gln Cys Thr Ser Gly Glu Ser Glu Gln Val Glu Gly Gly Met Ser		
50 55 60		
Lys Asp Asp Gly Asp Val Glu Arg Arg Asn Leu Glu Asp Leu Ser Ser		
65 70 75 80		
Thr Ser Pro Thr Asp Gly Thr Ile Gly Lys Arg Val Ser Asn Thr Arg		
85 90 95		
Asp Trp Ala Glu Gly Ser Asp Asp Ile Gln Leu Asp Pro Val Val Thr		
100 105 110		
Asp Val Val Tyr His Asp His Gly Gly Glu Cys Thr Gly Tyr Gly Phe		
115 120 125		
Thr Ser Ser Pro Glu Arg Gly Trp Ser Asp Tyr Thr Ser Gly Ala Asn		
130 135 140		
Asn Gly Asn Val Cys Leu Val Ser Asp Ala Lys Met Leu Ser Tyr Ala		
145 150 155 160		
Pro Glu Ile Ala Val Ser Lys Glu Asp Arg Glu Thr Asp Leu Val His		
165 170 175		
Leu Glu Asn Lys Leu Ser Thr Thr Gly Leu Asn Pro Thr Ala Val Pro		
180 185 190		
Phe Thr Leu Arg Asn Leu Ser Asp Pro Ala Lys Asp Ser Pro Val Ile		
195 200 205		
Ala Glu His Tyr Tyr Gly Leu Gly Val Lys Glu Gln Asn Val Gly Pro		
210 215 220		
Gln Thr Ser Arg Asn Val Asn Leu Asp Ser Ile Lys Leu Tyr Thr Ser		
225 230 235 240		
Asp Asp Glu Glu Ala Asp Gln Leu Glu Phe Glu Asp Glu Phe Ala Gly		
245 250 255		
Ser Ser Ser Glu Val Ile Val Gly Ile Ser Pro Glu Asp Glu Glu Pro		
260 265 270		
Ser Ser Val Gly Gly Lys Pro Asn Glu Ser Ile Gly Arg Thr Ile Glu		
275 280 285		
Gly Gln Ser Ile Arg Asp Asn Leu Gln Ala Lys Asp Asn Lys Ser Thr		
290 295 300		
Asp Val Pro Gly Ala Gly Pro Lys Asp Ser Ala Val Lys Glu Glu Pro		
305 310 315 320		
Pro Gln Lys Arg Leu Pro Met Leu Ala Glu Glu Phe Glu Cys Ser Gly		
325 330 335		
Ser Glu Asp Pro Ile Ile Arg Glu Leu Leu Lys Glu Asn Ser Leu Ile		

	340	345	350
Asn Cys Gln Gln Gly Lys Asp Ala Gln Pro Pro Tyr His Trp Ser Ile			
355	360	365	
Glu Arg Ser Ile Ser Pro Asp Lys Thr Glu Ile Val Asn Gly Ala Val			
370	375	380	
Gln Thr Ala Asp Arg Gln Arg Pro Gly Thr Pro Met Pro Lys Ser Arg			
385	390	395	400
Gly Ile Pro Ile Lys Lys Gly Thr Asp Ala Lys Tyr Pro Ser Ala Gly			
405	410	415	
Thr Glu Asn Val Pro Gly Ser Lys Ser Gly Ala Thr Arg His Val Arg			
420	425	430	
Gly Ser Pro Pro Tyr Gln Glu Gly Lys Ser Val Asn Ala Glu Asn Val			
435	440	445	
Gln Leu Asn Ala Ser Thr Ala Val Lys Glu Thr Asp Lys Ser Glu Val			
450	455	460	
Asn Pro Val Asp Asp Asn Asp Ser Leu Asp Asp Lys Tyr Ile Met Pro			
465	470	475	480
Ser Asp Asp Phe Ser Asn Thr Phe Phe Pro His Asp Thr Asp Arg Leu			
485	490	495	
Asn Tyr His Ala Asp His Leu Gly Asp Tyr Asp Leu Glu Thr Leu Cys			
500	505	510	
Glu Glu Ser Val Leu Met Gly Val Ile Asn Ser Ile Lys Leu Ile Asn			
515	520	525	
Leu Asp Met Arg Leu Asn His Ile Glu Glu Gln Val Lys Glu Ile Pro			
530	535	540	
Lys Ile Ile Asn Lys Leu Glu Ser Ile Asp Arg Val Leu Ala Lys Thr			
545	550	555	560
Asn Thr Ala Leu Ser Thr Ile Glu Gly His Leu Val Ser Met Met Ile			
565	570	575	
Met Ile Pro Gly Lys Gly Lys Gly Glu Arg Lys Gly Lys Asn Asn Pro			
580	585	590	
Glu Leu Lys Pro Val Ile Gly Arg Asp Ile Leu Glu Gln Gln Ser Leu			
595	600	605	
Phe Ser Phe Asp Asn Val Lys Asn Phe Arg Asp Gly Ser Leu Thr Asn			
610	615	620	
Glu Pro Tyr Gly Ala Ala Val Gln Leu Arg Glu Asp Leu Ile Leu Pro			
625	630	635	640
Glu Leu Asn Phe Glu Glu Thr Asn Ala Ser Gln Phe Val Pro Met Ala			
645	650	655	
Asp Asp Ser Ser Arg Asp Val Ile Lys Thr Leu Ile Arg Thr His Ile			
660	665	670	
Lys Asp Arg Glu Leu Arg Ser Glu Leu Ile Gly Tyr Leu Asn Lys Ala			
675	680	685	
Glu Asn Asp Glu Glu Ile Gln Glu Ile Ala Asn Thr Val Asn Asp Ile			
690	695	700	
Ile Asp Gly Asn Ile			
705			

<210> 16

<211> 352

<212> PRT

<213> Paramyxovirus Nipah Virus

<400> 16

Met Glu Pro Asp Ile Lys Ser Ile Ser Ser Glu Ser Met Glu Gly Val			
1	5	10	15

Ser Asp Phe Ser Pro Ser Ser Trp Glu His Gly Gly Tyr Leu Asp Lys

	20	25	30												
Val	Glu	Pro	Glu	Ile	Asp	Glu	Asn	Gly	Ser	Met	Ile	Pro	Lys	Tyr	Lys
	35					40					45				
Ile	Tyr	Thr	Pro	Gly	Ala	Asn	Glu	Arg	Lys	Tyr	Asn	Asn	Tyr	Met	Tyr
	50				55				60						
Leu	Ile	Cys	Tyr	Gly	Phe	Val	Glu	Asp	Val	Glu	Arg	Thr	Pro	Glu	Thr
	65				70			75			80				
Gly	Lys	Arg	Lys	Lys	Ile	Arg	Thr	Ile	Ala	Ala	Tyr	Pro	Leu	Gly	Val
	85					90			95						
Gly	Lys	Ser	Ala	Ser	His	Pro	Gln	Asp	Leu	Leu	Glu	Glu	Leu	Cys	Ser
	100					105				110					
Leu	Lys	Val	Thr	Val	Arg	Arg	Thr	Ala	Gly	Ser	Thr	Glu	Lys	Ile	Val
	115					120				125					
Phe	Gly	Ser	Ser	Gly	Pro	Leu	Asn	His	Leu	Val	Pro	Trp	Lys	Lys	Val
	130					135			140						
Leu	Thr	Ser	Gly	Ser	Ile	Phe	Asn	Ala	Val	Lys	Val	Cys	Arg	Asn	Val
	145					150			155			160			
Asp	Gln	Ile	Gln	Leu	Asp	Lys	His	Gln	Ala	Leu	Arg	Ile	Phe	Phe	Leu
						165			170			175			
Ser	Ile	Thr	Lys	Leu	Asn	Asp	Ser	Gly	Ile	Tyr	Met	Ile	Pro	Arg	Thr
						180			185			190			
Met	Leu	Glu	Phe	Arg	Arg	Asn	Asn	Ala	Ile	Ala	Phe	Asn	Leu	Leu	Val
						195			200			205			
Tyr	Leu	Lys	Ile	Asp	Ala	Asp	Leu	Ser	Lys	Met	Gly	Ile	Gln	Gly	Ser
						210			215			220			
Leu	Asp	Lys	Asp	Gly	Phe	Lys	Val	Ala	Ser	Phe	Met	Leu	His	Leu	Gly
						225			230			235			240
Asn	Phe	Val	Arg	Arg	Ala	Gly	Lys	Tyr	Tyr	Ser	Val	Asp	Tyr	Cys	Arg
						245			250			255			
Arg	Lys	Ile	Asp	Arg	Met	Lys	Leu	Gln	Phe	Ser	Leu	Gly	Ser	Ile	Gly
						260			265			270			
Gly	Leu	Ser	Leu	His	Ile	Lys	Ile	Asn	Gly	Val	Ile	Ser	Lys	Arg	Leu
						275			280			285			
Phe	Ala	Gln	Met	Gly	Phe	Gln	Lys	Asn	Leu	Cys	Phe	Ser	Leu	Met	Asp
						290			295			300			
Ile	Asn	Pro	Trp	Leu	Asn	Arg	Leu	Thr	Trp	Asn	Asn	Ser	Cys	Glu	Ile
						305			310			315			320
Ser	Arg	Val	Ala	Ala	Val	Leu	Gln	Pro	Ser	Ile	Pro	Arg	Glu	Phe	Met
						325			330			335			
Ile	Tyr	Asp	Asp	Val	Phe	Ile	Asp	Asn	Thr	Gly	Arg	Ile	Leu	Lys	Gly
						340			345			350			

<210> 17

<211> 546

<212> PRT

<213> Paramyxovirus Nipah Virus

<400> 17

Met	Val	Val	Ile	Leu	Asp	Lys	Arg	Cys	Tyr	Cys	Asn	Leu	Leu	Ile	Leu
1				5				10				15			
Ile	Leu	Met	Ile	Ser	Glu	Cys	Ser	Val	Gly	Ile	Leu	His	Tyr	Glu	Lys
					20			25			30				
Leu	Ser	Lys	Ile	Gly	Leu	Val	Lys	Gly	Val	Thr	Arg	Lys	Tyr	Lys	Ile
					35			40			45				
Lys	Ser	Asn	Pro	Leu	Thr	Lys	Asp	Ile	Val	Ile	Lys	Met	Ile	Pro	Asn
					50			55			60				
Val	Ser	Asn	Met	Ser	Gln	Cys	Thr	Gly	Ser	Val	Met	Glu	Asn	Tyr	Lys

65	70	75	80
Thr Arg Leu Asn Gly Ile Leu Thr Pro Ile Lys Gly Ala Leu Glu Ile			
85	90	95	
Tyr Lys Asn Asn Thr His Asp Leu Val Gly Asp Val Arg Leu Ala Gly			
100	105	110	
Val Ile Met Ala Gly Val Ala Ile Gly Ile Ala Thr Ala Ala Gln Ile			
115	120	125	
Thr Ala Gly Val Ala Leu Tyr Glu Ala Met Lys Asn Ala Asp Asn Ile			
130	135	140	
Asn Lys Leu Lys Ser Ser Ile Glu Ser Thr Asn Glu Ala Val Val Lys			
145	150	155	160
Leu Gln Glu Thr Ala Glu Lys Thr Val Tyr Val Leu Thr Ala Leu Gln			
165	170	175	
Asp Tyr Ile Asn Thr Asn Leu Val Pro Thr Ile Asp Lys Ile Ser Cys			
180	185	190	
Lys Gln Thr Glu Leu Ser Leu Asp Leu Ala Leu Ser Lys Tyr Leu Ser			
195	200	205	
Asp Leu Leu Phe Val Phe Gly Pro Asn Leu Gln Asp Pro Val Ser Asn			
210	215	220	
Ser Met Thr Ile Gln Ala Ile Ser Gln Ala Phe Gly Gly Asn Tyr Glu			
225	230	235	240
Thr Leu Leu Arg Thr Leu Gly Tyr Ala Thr Glu Asp Phe Asp Asp Leu			
245	250	255	
Leu Glu Ser Asp Ser Ile Thr Gly Gln Ile Ile Tyr Val Asp Leu Ser			
260	265	270	
Ser Tyr Tyr Ile Ile Val Arg Val Tyr Phe Pro Ile Leu Thr Glu Ile			
275	280	285	
Gln Gln Ala Tyr Ile Gln Glu Leu Leu Pro Val Ser Phe Asn Asn Asp			
290	295	300	
Asn Ser Glu Trp Ile Ser Ile Val Pro Asn Phe Ile Leu Val Arg Asn			
305	310	315	320
Thr Leu Ile Ser Asn Ile Glu Ile Gly Phe Cys Leu Ile Thr Lys Arg			
325	330	335	
Ser Val Ile Cys Asn Gln Asp Tyr Ala Thr Pro Met Thr Asn Asn Met			
340	345	350	
Arg Glu Cys Leu Thr Gly Ser Thr Glu Lys Cys Pro Arg Glu Leu Val			
355	360	365	
Val Ser Ser His Val Pro Arg Phe Ala Leu Ser Asn Gly Val Leu Phe			
370	375	380	
Ala Asn Cys Ile Ser Val Thr Cys Gln Cys Gln Thr Thr Gly Arg Ala			
385	390	395	400
Ile Ser Gln Ser Gly Glu Gln Thr Leu Leu Met Ile Asp Asn Thr Thr			
405	410	415	
Cys Pro Thr Ala Val Leu Gly Asn Val Ile Ile Ser Leu Gly Lys Tyr			
420	425	430	
Leu Gly Ser Val Asn Tyr Asn Ser Glu Gly Ile Ala Ile Gly Pro Pro			
435	440	445	
Val Phe Thr Asp Lys Val Asp Ile Ser Ser Gln Ile Ser Ser Met Asn			
450	455	460	
Gln Ser Leu Gln Gln Ser Lys Asp Tyr Ile Lys Glu Ala Gln Arg Leu			
465	470	475	480
Leu Asp Thr Val Asn Pro Ser Leu Ile Ser Met Leu Ser Met Ile Ile			
485	490	495	
Leu Tyr Val Leu Ser Ile Ala Ser Leu Cys Ile Gly Leu Ile Thr Phe			
500	505	510	
Ile Ser Phe Ile Ile Val Glu Lys Lys Arg Asn Thr Tyr Ser Arg Leu			
515	520	525	

Glu Asp Arg Arg Val Arg Pro Thr Ser Ser Gly Asp Leu Tyr Tyr Ile

530

535

540

Gly Thr

545

<210> 18

<211> 64

<212> PRT

<213> Paramyxovirus Nipah Virus

<400> 18

Pro Gly Thr Pro Met Pro Lys Ser Arg Gly Ile Pro Ile Lys Lys Gly

1

5

10

15

His Arg Arg Glu Ile Ser Ile Cys Trp Asp Gly Lys Arg Ala Trp Val

20

25

30

Glu Glu Trp Cys Asn Pro Ala Cys Ser Arg Ile Thr Pro Leu Pro Arg

35

40

45

Arg Gln Glu Cys Gln Cys Gly Glu Cys Pro Thr Glu Cys Phe His Cys

50

55

60